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# (12) United States Patent

## **Tanimoto**

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#### (54) ROLLING BEARING APPARATUS

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See application file for complete search history.

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## (57) ABSTRACT

A rolling bearing apparatus includes a bearing portion having an outer ring, an inner ring, a plurality of balls, and a cage that holds the balls, and an auxiliary portion provided adjacently to the bearing portion in an axial direction. The auxiliary portion has an auxiliary body portion provided adjacently to the outer ring in the axial direction and an extension portion extending in the axial direction from the auxiliary body portion and interposed between the cage and the inner ring. In the extension portion, a channel is formed that penetrates the extension portion in a direction inclined with respect to a radial direction. The channel is open in an outer peripheral surface of the extension portion, which faces the cage, and in an inner peripheral surface of the extension portion, which faces the inner ring.

# 8 Claims, 4 Drawing Sheets

